2. Determine the Volume Proportion by taking the difference between the benchmark and the actual performance result.

5.3. Calculate the Affected Volume by multiplying the Volume Proportion from step 4 by the Total Impacted CLEC-$_1$ Volume.

4. Calculate the payment to CLEC-1 by multiplying the result of step 5 by the appropriate dollar amount from the fee schedule.
5. CLEC-1 payment = Affected Volume$_{CLEC-1}$ * $$-from Fee Schedule

Example: CLEC-1 Percent Missed Due Dates for Collocations

	~~n_C~~	~~Benchmark~~	~~MIA_C~~	~~Volume Proportion~~	~~Affected Volume~~
	nC	**Benchmark**	**MIAC**	**Volume Proportion**	**Affected Volume**
~~State~~	~~600~~	~~10%~~	~~13%~~	~~.03~~	~~18~~
State	600	10%	13%	.03	18

Payout for CLEC-1 is (18 units) * ($5000/unit) = $90,000

~~TIER-1 CALCULATION FOR BENCHMARKS (in the form of a target):~~

- **Tier-1 Calculation For Benchmarks (In The Form Of A Target)**

1. For each CLEC with five or more observations calculate monthly performance results for the State.

2. CLECs having observations (sample sizes) between 5 and 30 will use Table I above.

3. Calculate the interval distribution based on the same data set used in step 1.

4. If the 'percent within' (or equivalent percentage for small samples) meets the benchmark standard, stop here. Otherwise, go to step 5.

5. Determine the Volume Proportion by taking the difference between benchmark and the actual performance result.

6. Calculate the Affected Volume by multiplying the Volume Proportion from step 5 by the Total CLEC-$_1$ Volume.

7. Calculate the payment to CLEC-1 by multiplying the result of step 6 by the appropriate dollar amount from the fee schedule.

CLEC-1 payment = Affected Volume$_{CLEC1}$ * $$-from Fee Schedule

Example: CLEC-1 Reject Timeliness

	n_C	Benchmark	Reject Timeliness	Volume Proportion	Affected Volume
State	600	95% within 1 hour	93% within 1 hour	.02	12

	nC	Benchmark	Reject Timeliness	Volume Proportion	Affected Volume
State	600	95% within 1 hour	93% within 1 hour	.02	12

Payout for CLEC-1 is (12 units) * ($100/unit) = $1,200

TIER-2 CALCULATIONS for BENCHMARKS:

1.

Tier-2 Calculations For Benchmarks

Tier-2 calculations for benchmark measures are the same as the Tier-1 benchmark calculations, except the CLEC Aggregate data having failed for three months.

BELLSOUTH®

Self-Effectuating Enforcement Mechanism Administrative Plan

Georgia Plan

Version 2.1

Updated March 4, 2002

Revision History

Date	Version	Author	Contributors	Notes
11/16/01		Ardene Whittlesey	Craig Duncan David Cornwall	Changes based on discussions with PSC staff: 2.7, add language about data retention 4.1.2, add benchmark 4.1.3, add retail analog, 4.1.6, change ALEC to submetric in 2nd sentence 4.2.3, remove entire paragraph & renumber 4.4.1, change last word to incurred 4.4.2, remove final sentence
10/25/01		Ardene Whittlesey	Dave Coon Leah Cooper David Cornwall Craig Duncan Bill Griffin	Initial Submission to PSC
01/22/02		Chris Mihok	Dave Coon	Added Tier 2 Measure Service Order Accuracy (Appendix A and B).
02/08/02	Version 2.0	Chris Mihok	Craig Duncan	Added Version Number to Document.
03/04/02	Version 2.1	Chris Mihok	Dave Coon Craig Duncan	Added five levels of disaggregation for Service Order Accuracy to Tier 2 Measures, Appendix B.

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Administrative Plan

1. Scope

1.1 This Administrative Plan ("Plan") includes Service Quality Measurements ("SQM") with corresponding Self Effectuating Enforcement Mechanisms ("SEEM") to be implemented by BellSouth pursuant to the Orders issued by the Georgia Public Service Commission (the "Commission") on January 12, 2001 and May 7, 2001, in Docket 7892-U.

1.2 All exhibits referred to in this plan are located on the BellSouth Performance Measurement Reports website at:

https://pmap.bellsouth.com

2. Reporting

2.1 In providing services pursuant to the Interconnection Agreements between BellSouth and each CLEC, BellSouth will report its performance to each CLEC in accordance with BellSouth's SQMs and applicable SEEMs, which are posted on the Performance Measurement Reports website.

2.2 BellSouth will make performance reports available to EACH CLEC on a monthly basis. The reports will contain information collected in each performance category and will be available to EACH CLEC via the Performance Measurements Reports website. BellSouth will also provide electronic access to the raw data underlying the SQMs.

2.3 Preliminary SQM reports will be posted on the Performance Measurements Reports website by 8:00 A.M. EST on the 21st day of each month or the first business day after the 21st for the previous month's performance. Final validated SQM reports will be posted by 8:00 A.M. EST on the last day of the month. SQM reports not posted by this time will be considered late for SEEM purposes.

2.4 Preliminary SEEM reports will be posted on the Performance Measurements Reports website by 8:00 A.M. EST on the last day of each month or the first business day after the last day of the month for the previous month's performance. Final validated SEEM reports will be posted on the 15th of the month, following the final validated SQM report.

2.5 BellSouth shall pay penalties to the Commission, in the aggregate, for late or incomplete reports on the following progressive sliding scale:

1-7	days	$5,000
8-15	days	$10,000
16-30	days	$40,000
31 +	days	$5,000 per day

3. Review of Measurements

3.1 Beginning in August 2001 and every six months thereafter BellSouth will review the SQMs and the SEEMS. All modifications to the SQMs will be approved by the Commission. EACH CLEC may provide input regarding any suggested additions, deletions or other modifications to the SQMs or the SEEMS. BellSouth will provide notice of all changes to the SQMs via the Performance Measurement Reports website.

3.2 BellSouth acknowledges that the Commission reserves the right to modify the SQMs or the SEEMS plan at any time it deems necessary upon Commission order.

4. Enforcement Mechanisms

4.1 Definitions

4.1.1 *Enforcement Measurement Elements* – the performance measurements identified as SEEM measurements within the SQM.

4.1.2 *Enforcement Measurement Benchmark* – a competitive level of performance negotiated by BellSouth used to evaluate the performance of BellSouth and EACH CLEC where no analogous retail process, product or service is feasible.

4.1.3 *Enforcement Measurement Compliance* – comparing performance levels provided to BellSouth retail customers with performance levels provided by BellSouth to the CLEC customer.

4.1.4 *Test Statistic and Balancing Critical Value* – the means by which enforcement will be determined using statistically valid equations. The Test Statistic and Balancing Critical Value are set forth in Exhibit C located on the Performance Measurements Reports website, incorporated herein by this reference.

4.1.5 *Cell* – a grouping of transactions at which like-to-like comparisons are made. For example, all BellSouth retail POTS services, for residential customers, requiring a dispatch in a particular wire center, at a particular point in time will be compared directly to CLEC resold services for residential customers, requiring a dispatch, in the same wire center, at a particular point in time. When determining compliance, these cells can have a positive or negative Test Statistic. See Exhibit C located on the Performance Measurements Reports website, incorporated herein by this reference.

4.1.6 *Affected Volume* – that proportion of the total impacted CLEC volume or CLEC Aggregate volume for which remedies will be paid.

4.1.7 *Delta* – a measure of the meaningful difference between BellSouth performance and CLEC performance. For individual CLECs the Delta value shall be .50 and for the CLEC aggregate the Delta value shall be .35.

4.1.8 *Parity Gap* – refers to the incremental departure from a compliant-level of service. This is also referred to as "diff" in the Statistical paper located at Exhibit C located on the Performance Measurements Reports website, incorporated herein by this reference.

4.1.9 *Tier-1 Enforcement Mechanisms* – self-executing liquidated damages paid directly to EACH CLEC when BellSouth delivers non-compliant performance of any one of the Tier-1 Enforcement Measurement Elements for any month as calculated by BellSouth.

4.1.10 *Tier-2 Enforcement Mechanisms* – assessments paid directly to the Georgia Public Service Commission or its designee. Tier 2 Enforcement Mechanisms are triggered by three consecutive monthly failures in which BellSouth performance is out of compliance or does not meet the benchmarks for the aggregate of all CLEC data as calculated by BellSouth for a particular Tier-2 Enforcement Measurement Element.

4.1.11 *Tier-3 Enforcement Mechanisms* – the voluntary suspension of additional marketing and sales of long distance services triggered by excessive repeat failures of those specific submeasures as defined in Exhibit B located on the Performance Measurements Reports website, incorporated herein by this reference until BellSouth performance improves.

4.2 Application

4.2.1 The application of the Tier-1, Tier-2, and Tier-3 Enforcement Mechanisms does not foreclose other legal and regulatory claims and remedies available to EACH CLEC.

4.2.2 Payment of any Tier-1 or Tier-2 Enforcement Mechanisms shall not be considered as an admission against interest or an admission of liability or culpability in any legal, regulatory or other proceeding relating to BellSouth's performance. The payment of any Tier-1 Enforcement Mechanisms to EACH CLEC shall be credited against any liability associated with or related to BellSouth's service performance.

4.2.3 It is not the intent of the Parties that BellSouth be liable for both Tier-2 Enforcement Mechanisms and any other assessments or sanctions imposed by the Commission. CLECs will not oppose any effort by BellSouth to set off Tier-2 Enforcement Mechanisms from any additional assessment imposed by the Commission.

4.2.4 The Enforcement Mechanisms contained in this Plan have been provided by BellSouth in order to maintain compliance between BellSouth and each CLEC. Therefore, CLECs may not use the existence of this section or any payments of any Tier-1 or Tier-2 Enforcement Mechanisms under this section as evidence that BellSouth has not complied with or has violated any state or federal law or regulation.

4.3 Methodology

4.3.1 Tier-1 Enforcement Mechanisms will be triggered by BellSouth's failure to achieve applicable Enforcement Measurement Compliance or Enforcement Measurement Benchmarks for EACH CLEC for the State of Georgia for a given Enforcement Measurement Element in a given month. Enforcement Measurement Compliance is based upon a Test Statistic and Balancing Critical Value calculated by BellSouth utilizing BellSouth generated data. The method of calculation is set forth in Exhibit D located on the Performance Measurements Reports website, incorporated herein by this reference.

4.3.1.1 Tier-1 Enforcement Mechanisms apply on a per transaction basis for each negative cell and will escalate based upon the number of consecutive months that BellSouth has reported non-compliance.

4.3.1.2 Fee Schedule for Tier-1 Enforcement Mechanisms is shown on the Performance Measurement Reports website in Table-1 of Exhibit A, incorporated herein by this reference. Failures beyond Month 6 will be subject to Month 6 fees.

4.3.2 Tier-2 Enforcement Mechanisms will be triggered by BellSouth's failure to achieve applicable Enforcement Measurement Compliance or Enforcement Measurement Benchmarks for the State for given Enforcement Measurement Elements for three consecutive months based upon a statistically valid equation calculated by BellSouth utilizing BellSouth generated data. The method of calculation is set forth in Exhibit D located on the Performance Measurements Reports website, incorporated herein by this reference.

4.3.2.1 Tier- 2 Enforcement Mechanisms apply, for an aggregate of all CLEC data generated by BellSouth, on a per transaction basis for each negative cell for a particular Enforcement Measurement Element.

4.3.2.2 Fee Schedule for Total Quarterly Tier-2 Enforcement Mechanisms is shown on the Performance Measurement Reports website in Table-2 of Exhibit A, incorporated herein by this reference.

4.3.3 Tier-3 Enforcement Mechanisms will be triggered by BellSouth's failure to achieve Enforcement Measurement Compliance or Enforcement Measurement Benchmarks for the State for given Enforcement Measurement Elements for three consecutive months. The method of calculation for specified submeasures is identical to the method of calculation for Tier-2 Enforcement Mechanisms as described above. The specific submeasures which are the mechanism for triggering and removing a Tier-3 Enforcement Mechanisms are described in Exhibit B on the Performance Measurement Reports website, incorporated herein by this reference.

4.4 Payment of Tier-1 and Tier-2 Amounts

4.4.1 If BellSouth performance triggers an obligation to pay Tier-1 Enforcement Mechanisms to a CLEC or an obligation to remit Tier-2 Enforcement Mechanisms to the Commission or its designee, BellSouth shall make payment in the required amount on the day upon which the final validated SEEM reports are posted on the Performance Measurements Reports website as set forth in Section 2.4 above.

4.4.2 For each day after the due date that BellSouth fails to pay a CLEC the required amount, BellSouth will pay the CLEC 6% simple interest per annum.

4.4.3 For each day after the due date that BellSouth fails to pay the Tier-2 Enforcement Mechanisms, BellSouth will pay the Commission an additional $1,000 per day.

4.4.4 If a CLEC disputes the amount paid to for Tier-1 Enforcement Mechanisms, the CLEC shall submit a written claim to BellSouth within sixty (60) days after the date of the performance measurement report for which the obligation arose. BellSouth shall investigate all claims and provide the CLEC written findings within thirty (30) days after receipt of the claim. If BellSouth determines the CLEC is owed additional amounts, BellSouth shall pay the CLEC such additional amounts within thirty (30) days after its findings along with 6% simple interest per annum.

4.4.5 BellSouth may set off any SEEMS payment to a CLEC against undisputed amounts owed by a CLEC to BellSouth pursuant to the Interconnection Agreement between the parties which have not been paid to BellSouth within ninety (90) days past the Bill Due Date as set forth in the Billing Attachment of the Interconnection Agreement.

4.4.6 At the end of each calendar year, BellSouth will have its independent auditing and accounting firm certify that the results of all Tier-1 and Tier-2 Enforcement Mechanisms were paid and accounted for in accordance with Generally Accepted Account Principles (GAAP).

4.5 Limitations of Liability

4.5.1 BellSouth will not be responsible for CLEC acts or omissions that cause performance measures to be missed or fail, including but not limited to accumulation and submission of orders at unreasonable quantities or times or failure to submit accurate orders or inquiries. BellSouth shall provide each CLEC with reasonable notice of such acts or omissions and provide each CLEC any such supporting documentation.

4.5.2 BellSouth shall not be obligated for Tier-1, Tier-2 or Tier 3 Enforcement Mechanisms for non-compliance with a performance measure if such non-compliance was the result of an act or omission by a CLEC that is in bad faith.

4.5.3 BellSouth shall not be obligated to pay Tier-1 Enforcement Mechanisms or Tier-2 Enforcement Mechanism for non-compliance with a performance measurement if such non-compliance was the result of any of the following: a Force Majeure event as set forth in the General Terms and Conditions of the Interconnection Agreement between BellSouth and each CLEC; an act or omission by a CLEC that is contrary to any of its obligations under its Interconnection Agreement with BellSouth; an act or omission by a CLEC that is contrary to any of its obligations under the Act, Commission rule, or state law; an act or omission associated with third-party systems or equipment.

4.6 Enforcement Mechanism Cap

4.6.1 BellSouth's total liability for the payment of Tier-1 and Tier-2 Enforcement Mechanisms shall be collectively capped at 44% of net revenue per year for the state of Georgia.

4.6.2 If projected payments exceed the state cap, a proportional payment will be made to the respective parties.

4.6.3 If BellSouth's payment of Tier-1 and Tier-2 Enforcement Mechanisms would have exceeded the cap referenced in this plan, a CLEC may commence a proceeding with the Commission to demonstrate why

4.6.4 BellSouth should pay any amount in excess of the cap. Each CLEC shall have the burden of proof to demonstrate why, under the circumstances, BellSouth should have additional liability.

4.7 Audits

4.7.1 All auditing provisions of the Interconnection Agreement between BellSouth and each CLEC shall remain in full force and effect.

4.7.2 If requested by the Commission or a CLEC invoking its contractual audit rights, BellSouth will undergo a comprehensive audit of the aggregate level reports for BellSouth and the CLECs for each of the next five (5) years (2001-2005), to be conducted by an independent third party. The results of the audit will be made available to all parties subject to a confidentiality agreement. An aggregate level audit includes the following:

1. Costs of all audits shall be borne 50% by BellSouth and 50% by a CLEC or CLECs;
2. The independent third party auditor shall be selected by mutual agreement of BellSouth and the Commission with input from the CLEC or CLECs;
3. BellSouth, the Commission and the CLEC or CLECs shall determine the scope of the audit.

4.8 Dispute Resolution

4.8.1 Notwithstanding any other provision of the Interconnection Agreement between BellSouth and each CLEC, any dispute regarding BellSouth's performance or obligations pursuant to this Plan shall be resolved by the Commission.

Appendix A: Fee Schedule

1. Table-1: Liquidated Damages For Tier-1 Measures (Per Affected Item)

Performance Measurment	Month 1	Month 2	Month3	Month4	Month 5	Month 6
Pre-Ordering	$20	$30	$40	$50	$60	$70
Ordering	$40	$50	$60	$70	$80	$90
Provisioning	$100	$125	$175	$250	$325	$500
Provisioning UNE (Coordinated Customer Conversions)	$400	$450	$500	$550	$650	$800
Maintenance and Repair	$100	$125	$175	$250	$325	$500
Maintenance and Repair UNE	$400	$450	$500	$550	$650	$800
LNP	$150	$250	$500	$600	$700	$800
Billing	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00
IC Trunks	$100	$125	$175	$250	$325	$500
Collocation	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000

2. Table-2: Remedy Payments For Tier-2 Measures

Performance Measurment	Per Affected Item
OSS/Pre-Ordering	$20
Ordering	$60
Provisioning	$300
Provisioning-UNE (Coordinated Customer Conversions)	$875
Maintenance and Repair	$300
Maintenance and Repair-UNE	$875
Billing	$1.00
LNP	$500
IC Trunks	$500
Collocation	$15,000
Change Management	$1,000
Service Order Accuracy	$50

Appendix B: SEEM Submetrics

1. Tier 1 Submetrics

Table B-1 contains a list of Tier 1 submetrics.

Table B-1: Tier 1 Submetrics

Item No.	Submetric
1	Loop Makeup - Response Time - Manual
2	Loop Makeup - Response Time - Electronic
3	Acknowledgement Message Timeliness
4	Acknowledgement Message Completeness
5	Percent Flow-Through Service Requests (Detail)
6	Reject Interval
7	Firm Order Confirmation Timeliness
8	Firm Order Confirmation and Reject Response Completeness - Fully Mechanized
9	Percent Missed Installation Appointments - Resale POTS
10	Percent Missed Installation Appointments - Resale Design
11	Percent Missed Installation Appointments - UNE Loop and Port Combinations
12	Percent Missed Installation Appointments - UNE Loops
13	Percent Missed Installation Appointments - UNE xDSL
14	Percent Missed Installation Appointments - UNE Line Sharing
15	Percent Missed Installation Appointments - Local IC Trunks
16	Average Completion Interval - Resale POTS
17	Average Completion Interval - Resale Design
18	Average Completion Interval - UNE Loop and Port Combinations
19	Average Completion Interval - UNE Loops
20	Average Completion Interval - UNE xDSL
21	Average Completion Interval - UNE Line Sharing
22	Average Completion Interval - Local IC Trunks
23	Coordinated Customer Conversions Interval - Unbundled Loops
24	Coordinated Customer Conversions - Hot Cut Timeliness Percent within interval - UNE Loops
25	Coordinated Customer Conversions - Percent Provisioning Troubles Received within 7 days of a completed service order - UNE Loops
26	Cooperative Acceptance Testing - Percent of xDSL Loops Tested
27	Percent Provisioning Troubles within 30 days of Service Order Completion - Resale POTS
28	Percent Provisioning Troubles within 30 days of Service Order Completion - Resale Design
29	Percent Provisioning Troubles within 30 days of Service Order Completion - UNE Loop and Port Combinations
30	Percent Provisioning Troubles within 30 days of Service Order Completion - UNE Loops
31	Percent Provisioning Troubles within 30 days of Service Order Completion - UNE xDSL
32	Percent Provisioning Troubles within 30 days of Service Order Completion - UNE Line Sharing

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
33	Percent Provisioning Troubles within 30 days of Service Order Completion - Local IC Trunks
34	LNP - Percent Missed Installation Appointments - LNP
35	LNP - Average Disconnect Timeliness Interval - LNP
36	Missed Repair Appointments - Resale POTS
37	Missed Repair Appointments - Resale Design
38	Missed Repair Appointments - UNE Loop and Port Combinations
39	Missed Repair Appointments - UNE Loops
40	Missed Repair Appointments - UNE xDSL
41	Missed Repair Appointments - UNE Line Sharing
42	Missed Repair Appointments - Local IC Trunks
43	Customer Trouble Report Rate - Resale POTS
44	Customer Trouble Report Rate - Resale Design
45	Customer Trouble Report Rate - UNE Loop and Port Combinations
46	Customer Trouble Report Rate - UNE Loops
47	Customer Trouble Report Rate - UNE xDSL
48	Customer Trouble Report Rate - UNE Line Sharing
49	Customer Trouble Report Rate - Local IC Trunks
50	Maintenance Average Duration - Resale POTS
51	Maintenance Average Duration - Resale Design
52	Maintenance Average Duration - UNE Loop and Port Combinations
53	Maintenance Average Duration - UNE Loops
54	Maintenance Average Duration - UNE xDSL
55	Maintenance Average Duration - UNE Line Sharing
56	Maintenance Average Duration - Local IC Trunks
57	Percent Repeat Troubles within 30 days - Resale POTS
58	Percent Repeat Troubles within 30 days - Resale Design
59	Percent Repeat Troubles within 30 days - UNE Loop and Port Combinations
60	Percent Repeat Troubles within 30 days - UNE Loops
61	Percent Repeat Troubles within 30 days - UNE xDSL
62	Percent Repeat Troubles within 30 days - UNE Line Sharing
63	Percent Repeat Troubles within 30 days - Local IC Trunks
64	Invoice Accuracy
65	Mean Time to Deliver Invoices
66	Usage Data Delivery Accuracy
67	Trunk Group Performance - CLEC Specific
68	Collocation Percent of Due Dates Missed

2. Tier 2 Submetrics

Table B-2 contains a list of Tier 2 submetrics.

Table B-2: Tier 2 Submetrics

Item No.	Tier 2 Sub Metrics
1	Average Response Time - Pre-Ordering/Ordering
2	Interface Availability - Pre-Ordering/Ordering
3	Interface Availability - Maintenance & Repair
4	Loop Makeup - Response Time - Manual
5	Loop Makeup - Response Time - Electronic
6	Acknowledgement Message Timeliness - EDI
7	Acknowledgement Message Timeliness - TAG
8	Acknowledgement Message Completeness EDI
9	Acknowledgement Message Completeness TAG
10	Percent Flow-through Service Requests (Summary)
11	Reject Interval
12	Firm Order Confirmation Timeliness
13	Firm Order Confirmation and Reject Response Completeness - Fully Mechanized
14	Percent Missed Installation Appointments - Resale POTS
15	Percent Missed Installation Appointments - Resale Design
16	Percent Missed Installation Appointments - UNE Loop and Port Combinations
17	Percent Missed Installation Appointments - UNE Loops
18	Percent Missed Installation Appointments - UNE xDSL
19	Percent Missed Installation Appointments - UNE Line Sharing
20	Percent Missed Installation Appointments - Local IC Trunks
21	Average Completion Interval - Resale POTS
22	Average Completion Interval - Resale Design
23	Average Completion Interval - UNE Loop and Port Combinations
24	Average Completion Interval - UNE Loops
25	Average Completion Interval - UNE xDSL
26	Average Completion Interval - UNE Line Sharing
27	Average Completion Interval - Local IC Trunks
28	Coordinated Customer Conversions Interval - Unbundled Loops
29	Coordinated Customer Conversions - Hot Cut Timeliness Percent within interval - UNE Loops
30	Coordinated Customer Conversions - Percent Provisioning Troubles Received within 7 days of a completed service order - UNE Loops
31	Cooperative Acceptance Testing - Percent xDSL Loops Tested
32	Percent Provisioning Troubles within 30 days of Service Order Completion - Resale POTS
33	Percent Provisioning Troubles within 30 days of Service Order Completion - Resale Design

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
34	Percent Provisioning Troubles within 30 days of Service Order Completion - UNE Loop and Port Combinations
35	Percent Provisioning Troubles within 30 days of Service Order Completion - UNE Loops
36	Percent Provisioning Troubles within 30 days of Service Order Completion - UNE xDSL
37	Provisioning Troubles within 30 days of Service Order Completion - UNE Line Sharing
38	Percent Provisioning Troubles within 30 days of Service Order Completion - Local IC Trunks
39	LNP - Percent Missed Installation Appointments
40	LNP - Average Disconnect Timeliness Interval
41	Missed Repair Appointments - Resale POTS
42	Missed Repair Appointments - Resale Design
43	Missed Repair Appointments - UNE Loop and Port Combinations
44	Missed Repair Appointments - UNE Loops
45	Missed Repair Appointments - UNE xDSL
46	Missed Repair Appointments - UNE Line Sharing
47	Missed Repair Appointments - Local IC Trunks
48	Customer Trouble Report Rate - Resale POTS
49	Customer Trouble Report Rate - Resale Design
50	Customer Trouble Report Rate - UNE Loop and Port Combinations
51	Customer Trouble Report Rate - UNE Loops
52	Customer Trouble Report Rate - UNE xDSL
53	Customer Trouble Report Rate - UNE Line Sharing
54	Customer Trouble Report Rate - Local IC Trunks
55	Maintenance Average Duration - Resale POTS
56	Maintenance Average Duration - Resale Design
57	Maintenance Average Duration - UNE Loop and Port Combinations
58	Maintenance Average Duration - UNE Loops
59	Maintenance Average Duration - UNE xDSL
60	Maintenance Average Duration - UNE Line Sharing
61	Maintenance Average Duration - Local IC Trunks
62	Percent Repeat Troubles within 30 days - Resale POTS
63	Percent Repeat Troubles within 30 days - Resale Design
64	Percent Repeat Troubles within 30 days - UNE Loop and Port Combinations
65	Percent Repeat Troubles within 30 days - UNE Loops
66	Percent Repeat Troubles within 30 days - UNE xDSL
67	Percent Repeat Troubles within 30 days - UNE Line Sharing
68	Percent Repeat Troubles within 30 days - Local IC Trunks
69	Invoice Accuracy
70	Mean Time to Deliver Invoices

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
71	Usage Data Delivery Accuracy
72	Trunk Group Performance - Aggregate
73	Collocation Percent of Due Dates Missed
74	Timeliness of Change Management Notices
75	Timeliness of Documents Associated with Change
76	Service Order Accuracy - Resale Residence
77	Service Order Accuracy - Resale Business
78	Service Order Accuracy - Resale Design
79	Service Order Accuracy - UNE Specials (Design)
80	Service Order Accuracy UNE (Non-design)

3. Tier 3 Submetrics

Table B-3 contains a list of Tier 3 submetrics.

Table B-3: Tier 3 Submetrics

Item No.	Tier 3 Sub Metrics
1	Percent Missed Installation Appointments - Resale POTS
2	Percent Missed Installation Appointments - Resale Design
3	Percent Missed Installation Appointments - UNE Loop
4	Percent Missed Installation Appointments - UNE Loop & Port Combo
5	Percent Missed Installation Appointments - UNE xDSL (ADSL, HDSL, UCL)
6	Percent Missed Installation Appointments - UNE Line Sharing
7	Percent Missed Installation Appointments - Interconnection Trunks
8	Average Completion Interval (OCI) & Order Completion Interval Distribution - Resale POTS
9	Average Completion Interval (OCI) & Order Completion Interval Distribution - Resale Design
10	Average Completion Interval (OCI) & Order Completion Interval Distribution - UNE Loop & Port Combo
11	Average Completion Interval (OCI) & Order Completion Interval Distribution - UNE xDSL (ADSL, HDSL, UCL)
12	Average Completion Interval (OCI) & Order Completion Interval Distribution - UNE Line Sharing
13	Average Completion Interval (OCI) & Order Completion Interval Distribution - Interconnection Trunks
14	Missed Repair Appointments - Resale POTS
15	Missed Repair Appointments - Resale Design
16	Missed Repair Appointments - UNE Loop + Port Combo
17	Missed Repair Appointments - UNE Loops
18	Missed Repair Appointments - UNE xDSL
19	Missed Repair Appointments - UNE Line Sharing
20	Missed Repair Appointments - Interconnection Trunks
21	Invoice Accuracy
22	Mean Time To Deliver Invoices
23	Trunk Group Performance - Aggregate
24	Collocation Percent of Due Dates Missed
25	Timeliness of Change Management Notices
26	Timeliness of Documents Associated with Change

Appendix C: Statistical Properties and Definitions

Statistical Methods for BellSouth Performance Measure Analysis

1. Necessary Properties for a Test Methodology

The statistical process for testing if competing local exchange carriers (CLECs) customers are being treat equally with BellSouth (BST) customers involves more than just a mathematical formula. Three key elements need to be considered before an appropriate decision process can be developed. These are

- the type of data,
- the type of comparison, and
- the type of performance measure.

Once these elements are determined a test methodology should be developed that complies with the following properties.

- *Like-to-Like Comparisons* – When possible, data should be compared at appropriate levels, e.g. wire center, time of month, dispatched, and residential, new orders. The testing process should:
  - Identify variables that may affect the performance measure.
  - Record these important confounding covariates.
  - Adjust for the observed covariates in order to remove potential biases and to make the CLEC and the ILEC units as comparable as possible.

- *Aggregate Level Test Statistic* – Each performance measure of interest should be summarized by one overall test statistic giving the decision maker a rule that determines whether a statistically significant difference exists. The test statistic should have the following properties.
  - The method should provide a single overall index, on a standard scale.
  - If entries in comparison cells are exactly proportional over a covariate, the aggregated index should be very nearly the same as if comparisons on the covariate had not been done.
  - The contribution of each comparison cell should depend on the number of observations in the cell.
  - Cancellation between comparison cells should be limited.
  - The index should be a continuous function of the observations.

- *Production Mode Process* – The decision system must be developed so that it does not require intermediate manual intervention, i.e. the process must be a "black box."
  - Calculations are well defined for possible eventualities.
  - The decision process is an algorithm that needs no manual intervention.
  - Results should be arrived at in a timely manner.
  - The system must recognize that resources are needed for other performance measure-related processes that also must be run in a timely manner.
  - The system should be auditable, and adjustable over time.

- *Balancing* – The testing methodology should balance Type I and Type II Error probabilities.
  - P(Type I Error) = P(Type II Error) for well defined null and alternative hypotheses.
  - The formula for a test's balancing critical value should be simple enough to calculate using standard mathematical functions, i.e. one should avoid methods that require computationally intensive techniques.
  - Little to no information beyond the null hypothesis, the alternative hypothesis, and the number of observations should be required for calculating the balancing critical value.

- *Trimming* – Removing extreme observations from BellSouth and CLEC distributions is needed in order to ensure that a fair comparison is made between performance measures. Three conditions are needed to accomplish this goal. These are:
  - Trimming should be based on a general rule that can be used in a production setting.
  - Trimmed observations should not simply be discarded; they need to be examined and possibly used in the final decision making process.
  - Trimming should only be used on performance measures that are sensitive to "outliers."

Measurement Types

The performance measures that will undergo testing are of four types:

- means
- proportions,
- rates, and
- ratio

While all four have similar characteristics, proportions and rates are derived from count data while means and ratios are derived from interval measurements.

2. Testing Methodology – The Truncated Z

Many covariates are chosen in order to provide deep comparison levels. In each comparison cell, a Z statistic is calculated. The form of the Z statistic may vary depending on the performance measure, but it should be distributed approximately as a standard normal, with mean zero and variance equal to one. Assuming that the test statistic is derived so that it is negative when the performance for the CLEC is worse than for the ILEC, a positive truncation is done – i.e. if the result is negative it is left alone, if the result is positive it is changed to zero. A weighted average of the truncated statistics is calculated where a cell weight depends on the volume of BST and CLEC orders in the cell. The weighted average is re-centered by the theoretical mean of a truncated distribution, and this is divided by the standard error of the weighted average. The standard error is computed assuming a fixed effects model.

Proportion Measures

For performance measures that are calculated as a proportion, in each adjustment cell, the truncated Z and the moments for the truncated Z can be calculated in a direct manner. In adjustment cells where proportions are not close to zero or one, and where the sample sizes are reasonably large, a normal approximation can be used. In this case, the moments for the truncated Z come directly from properties of the standard normal distribution. If the normal approximation is not appropriate, then the Z statistic is calculated from the hypergeometric distribution. In this case, the moments of the truncated Z are calculated exactly using the hypergeometric probabilities.